



EXAMINING GROUP 2703
PATENT
ATTORNEY DOCKET NO. 1999P07535US06 (1009-043)
SERIAL NO. 09/732,574

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No. 09/732,574
Applicant Mark Steven Boggs et al.
Filed 8 December 2000
Title PROGRAMMABLE LOGIC CONTROLLER FUNCTION CALL
METHOD, SYSTEM, AND APPARATUS
Art Unit 2182
Examiner Niketa I. Patel

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Technology Center 2100

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132

Sir:

I, Dr. Ronald D. Williams, a citizen of the United States, whose full post office address is
1715 Hearthglow Lane, Charlottesville, VA 22901 declare as follows under penalty of perjury.

1. I hold a Ph.D. degree in Electrical Engineering from the Massachusetts Institute of
Technology awarded in 1984.
2. I hold a M.S. degree in Electrical Engineering from the University of Virginia
awarded in 1978.
3. I hold a B.S. degree in Electrical Engineering from the University of Virginia
awarded in 1977.

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4. I am currently an associate professor of Electrical & Computer Engineering at the University of Virginia.
5. Since 1984, I have worked continually in the field of electrical engineering with particular emphasis in embedded computing with applications in control and signal processing.
6. During my career, I have been granted five U.S. patents for my own inventions in the field of embedded computing.
7. I have reviewed Application Serial No. 09/732,574.
8. I have reviewed U.S. Patent Nos. 6,134,707 (Herrmann).
9. Among the devices with which I was familiar prior to 8 December 2000, the filing date of Application Serial No. 09/732,574, were systems of the type recited in Herrmann.
10. Regarding Application Serial No. 09/732,574, I have reviewed the U.S. Patent Office Action dated 24 August 2004 (the "Office Action").
11. The Office Action contains the following statement: "Herrmann teaches an apparatus and a method for supporting customized function calls in a programmable logic controller [see figure 1 – element 30]". See page 3 of the Office Action. Element 30 of figure 1 is described in Herrmann as a "printed circuit board". See Herrmann, col. 4 lines 54 (describing element 30 of figure 1).
12. That statement in the Office Action is factually incorrect in view of the state of the

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electrical engineering art as of 8 December 2000, the filing date of Application Serial No. 09/732,574. One skilled in the art would not find that Herrmann teaches an “apparatus” or a “method” “for supporting customized function calls in a programmable logic controller”.

13. Specifically, one skilled in the art would interpret the term “programmable logic controller” to mean “a digitally operating electronic apparatus which uses a programmable memory for the internal storage of instructions for implementing specific functions such as logic, sequencing, timing, counting and arithmetic to control through digital or analog input/output modules, various types of machines or processes”.
14. For evidence supporting this definition, one skilled in the art would have looked to a standard setting body such as the National Electrical Manufacturers Association (NEMA). NEMA defines a programmable logic controller as “a digitally operating electronic apparatus which uses a programmable memory for the internal storage of instructions for implementing specific functions such as logic, sequencing, timing, counting and arithmetic to control through digital or analog input/output modules, various types of machines or processes”. See NEMA Standard ICS 3-1978, Part ICS3-304(5) (relevant pages attached hereto).
15. Contrary to the art-accepted definition of a programmable logic controller, Herrmann does not teach or suggest “implementing specific functions such as logic, sequencing,

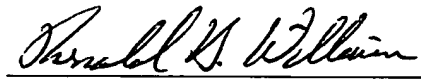
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timing, counting and arithmetic to control through digital or analog input/output modules, various types of machines or processes.”

16. Accordingly, one skilled in the art would not find that Herrmann teaches an “apparatus” or a “method” “for supporting customized function calls in a programmable logic controller”.

I further declare that all statements made herein of my own knowledge are true and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this eighth day of November 2004


Dr. Ronald D. Williams